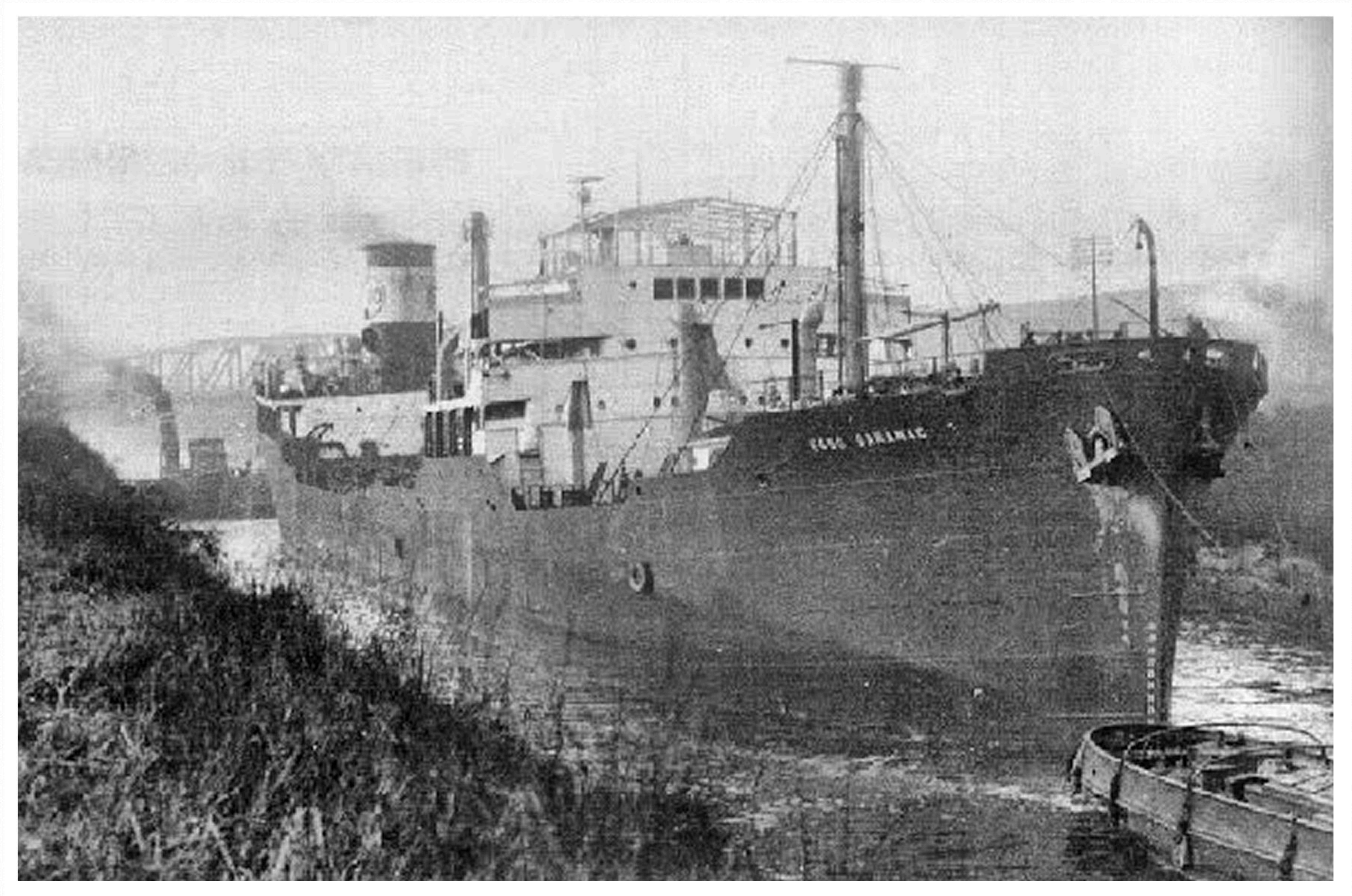
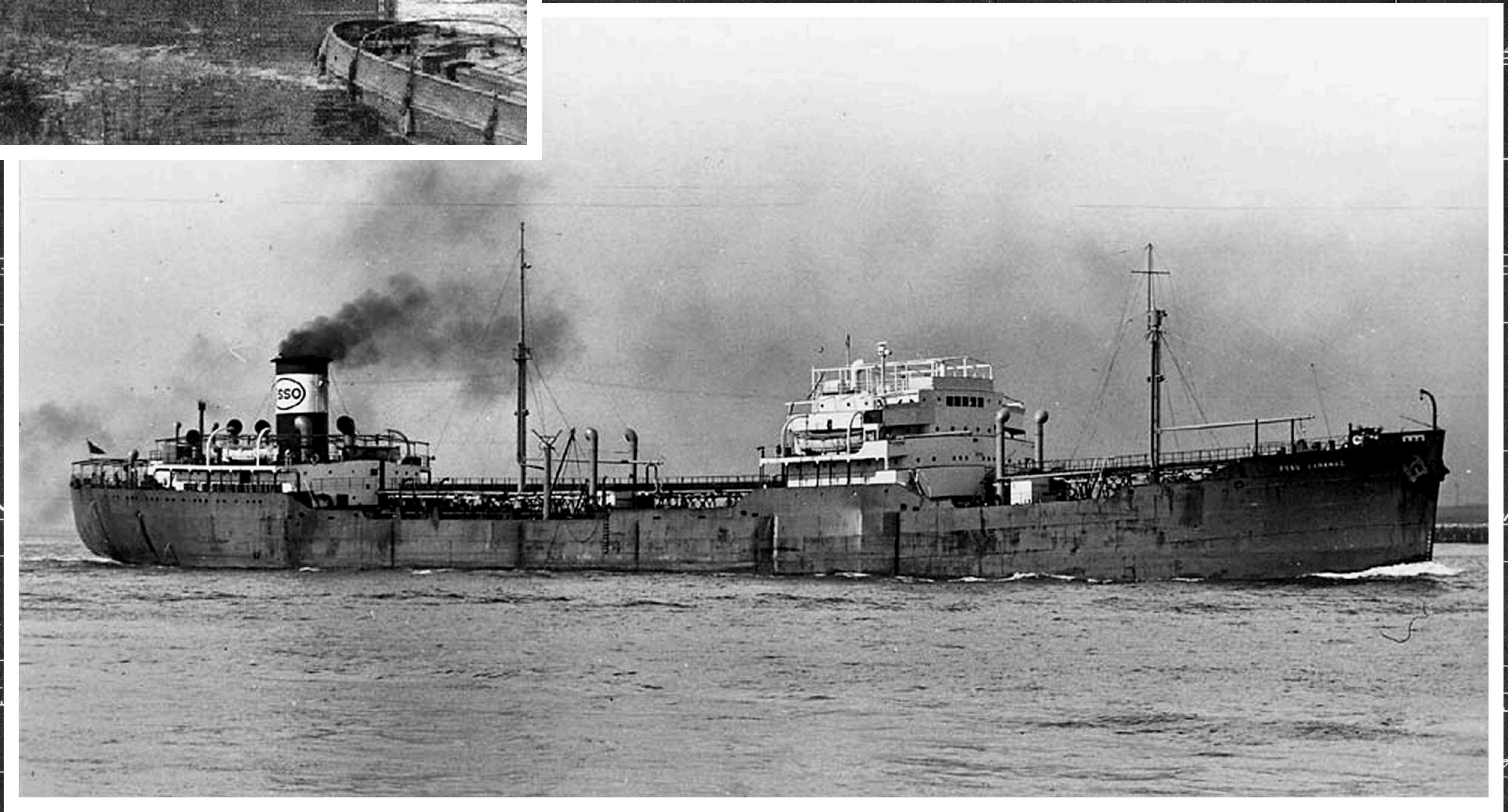
Nº 329.

PROFILE AND DECK PLAN

MLD 61'-0", DEPTH MLD 33'-3"

ARD REVISED JULY 1924





Navigating Bridge

Bridge

op Front Stiffrs 10"×3½"×.2 BA at centre

ing .44 " 10"×3½"×7/16 BA at sides

Nº 1 TANK

O.T. Bulkhead

Nº 2 TANK

O.T. Bulkhead

NK

O.T. Bulkhead

0'-4" 51 10'-4" 55 10'-4" 59 10'-4" 63 10'-4" 67

0'-8 Centre & Wing

31'-0" Centre & Wing

31 Fr Spacing

½L

41'-4" Wing Tanks

116 120

Centre

IN WAY OF OIL

RIVETING 1 Dia Rivets in Butts of Stringer Plates spaced 4 dias apart (Thickness .74 & above)

PROFILE & DECK PLANS

AS BUILT.

FURNESS S. B. C^{o} L^{td}

N° 329.

EMPIRE SAPPHIRE.

"Esso Saranac"

002830-002837-0072

No 329.

PROFILE AND DECK PLAN

SCALE 1/8" = 1 FOOT

DIMENSIONS :- LENGTH B.P. 460'-0", BREADTH MLD 61'-0", DEPTH MLD 33'-3"

NOTE :- ALL BULB ANGLE SECTIONS ARE NEW BRITISH STANDARD REVISED JULY 1924

POOP DECK
FORECASTLE DECK
Poop Side plating ·40"
Poop Deck
STEERING GEAR
Upper Deck
2nd Deck
REFRIG. SPACE
F.W. TANKS (Built in)
ENG'RS STORE & WORKSHOP
DYNAMO FLAT ·40"
AFTER PEAK TANK
W.T. Bulkhead
2 Boilers
WELL
FEED TANK
O.F. TANK
Navigating Bridge
Upper Bridge
Bridge
PUMP ROOM ENTRANCE
No 1 TANK
No 2 TANK
No 3 TANK
PUMP ROOM IN CENTRE
No 4 TANK
No 5 TANK
No 6 TANK
No 7 TANK
No 8 TANK
No 9 TANK
DEEP TANK
STORE
Frames spaced 24"
Fr Spacing 30"
Frame Spacing 30 3/4"
Frames Spacing 31 3/7"
Main Frames 10"×3½"×½" B.A. (Clear of Webs)
Alternate to Poop Deck
Frames 10"×3½"×·40" B.A.
Peak Frames 8"×3½"×7/16 B.A.
Intermediate Frs' in Poop 6"×3½"×3/8 O.A. (not attached)
1/2L
31'-0" Centre
13'-7" Pump Room
31'-0" Centre & Wing
31'-0" Wing & Centre
41'-4" Wing Tanks
3/5L
20'-8" Centre & Wing
31" Spacing
26" Frame Spacing
24" Frame Spacing
Peak Frames 8"×3½"×7/16 B.A. all to Forecastle Deck
Web on C.Line Bk'd 28"×·40" with face bar 8"×3½"×·35 B.A.
Back bars on Bottom Long'ls in Centre Tank 3½"×3½"×7/16"
Three Strakes of Bottom Shell next Keel increased to ·77 thick
Scantlings as per Midship Section
Sheer ·94"
Sheer 1·12"
Sheer ·88"
Sheer ·83"
Beams 9"×3½"×3/8" B.A.
Girder arranged to suit Steering Gear
FRESH WATER BELOW TANKS
W.T. Bulkhead below

IN WAY OF OIL

RIVETING 1 Dia Rivets in Butts of Stringer Plater spaced 4 dias apart (Thickness ·74 & above)
7/8" " " All Seams & Butts of Deck plating spaced 4 dias apart (Thickness ·72 & under)

Item No X 28165.
Ship Drawing Office.
Date 10-7-41.

PLAN T. No 4471.

002830-002837-0072

MIDSHIP SECTION

AS BUILT.

FURNESS. S.B. C^{o} L^{TD}

N° 329.

EMPIRE SAPPHIRE

N/N ESSO SARANAC

002830-002837-0073

Note! All B.A. Sections are New British Standard, Revised, July 1924.

Nº 329

MIDSHIP SECTION

DIMENSIONS :- 460'-0" B.P. x 61'-0" MLD. x 33'-3" MLD TO UPPER DK.

SCALE :- 1/2" = 1 Foot

Lloyds Numerals

1st Longitudinal Nº L x D 460'-0" = 33·25 = 15295·00
2nd " " L x (B+D) 460·0 x (61·0+33·25) = 43355·00
L/D to Upper Deck = 460·0 ÷ 33·25 = 13·83
D = 33·25

2nd Long^tl Nº L x (B+D)	= 43355·00
Poop 105·33 x 7·5 x 3/4	592·50
Bridge 43·16 x 7·5 x 3/4	242·70
Forecastle 38·5 x 7·5 x 3/4	216·57
House on Poop Deck 82·5 x 7·5 ÷ 2	309
House " Bridge " 120 x 7·5 ÷ 2	450
Equipment Nº	45165·77

To Class 100 A.1 ✠ at Lloyds carrying Petroleum in Bulk.

"Longitudinal Framing at Bottom and at Deck".

2 Bower Anchors 73 1/4 Cwts Each Stockless.
1 Stream " 22 " Ex Stock
240 Fathoms 2 1/8 Stud Chain Cable ("Tayco")
120 " 5" Flexible Steel Wire 6x12
130 " 5 1/4 Special Flexible Steel Wire 6x24
2 Hawsers 100 Fathoms 2 3/4 Steel Wire 6x12
2 Warps 100 " 2 3/4 " " 6x12

	Shear at Cr. of Tank	Plating	Stiffrs
Long^tl Bhd Nº1 ~~After Tank~~	1'-1"	+ ·01"	—
Nº2 to 6 "	as on Plan		
" " 7 "	1'-2 7/8"	+ ·01"	
" " 8 "	2'-9"	+ ·01"	
" " 9 "	4'-2"	+ ·02"	

Stringer 80 1/2 x ·37"
Bridge Deck Longitudinals 5" x 3" x 3/8" BA
Bridge Deck Plating ·34"
3 1/2 x 3 1/2 x 7/16
3" Tumble Home
S.R.
3" x 3" x 5/16
Bridge Side Plating ·44"
·50" at Bridge Ends
7" x 3" x 3/8" BA
Bkt ·38"
Flanged 3"
Channel 12" x 7/16" x 4" x 4" x ·60"
2 3/4" Dia Pillar
7'-6" MLD
Single 3 1/2 x 3 1/2 x 3/8"
Web 15" x ·38"
Face Bar 3 x 3 x 3/8 Single
7" x 3" x 3/8" BA
Upper Deck Long^ls 9" x 3 1/2 x 7/16" B.A. in way of Tanks, (Beams at Ends of Ship).
Hatch
3'-0"
Bkt ·38"
Fld 3"
Stringer 90" x ·78"
·88" at Poop & Bridge Ends
6 x 6 x 3/8
·60"
·72"
Stringer Angle 6" x 6" x 5/8"
to 3 1/2" x 3 1/2" x 7/16"
Sheerstrake 72" x ·94" to ·46"
Butt Quin^tle Overlap for 1/2L
to Treble at Ends
1·12 at Bridge Ends
1·08 at Poop Front
"L" IN & OUT
7/8 dia Rivs spaced 5 dias apart
7/8 dia Rivs spaced 6 dias apart
3 x 3 x 3/8
Single 3 1/2 x 3 1/2 x 7/16
Face Bar 6" x 3 1/2 x ·56" O.A. Single
Face Bar 6" x 3 1/2 x ·56" O.A. Single
3" Fl.
5 Flange
6 1/2" x 6 1/2 x 5/8" Tee Bar
Girder 60" x ·40" Continuous
Stiffrs 5 x 3 x 3/8 O.A.
Spaced 3'-6" apart
7" Flange
CAMBER 15"
Stem 10" x 2 3/4"
3'-0 1/2"
3 1/2" x 3 1/2 x 7/16 Single
·40 Brackets Fl.3"
7-7/8" Rivets each way
Stringer 90" x ·78"
Single 3 1/2 x 3 1/2 x 7/16
·40" Bkts Fl.3"
7-7/8" Rivets each way
2'-3"
2'-9"
6" Seam
1" dia Rivs
where over ·72"
Stroke below 72" x ·78" to ·46"
Butts Quad^le Riv. Overlaps
for 1/2L to Treble at Ends.
"K" OUT
Frames 10" x 3 1/2 x ·40" BA
Spaced 31" apart
Stiffrs 10" x 3 1/2" x ·42" BA
Spaced 31" apart
Stiffeners 10" x 3 1/2 x ·42" BA
Spaced 31" apart
Vertical Plating ·40"
13'-3"
6" Seam
1" dia Rivs
where over ·72"
3 1/2 x 3 1/2 x 7/16
6 x 6 x 1/2 for 3 Spaces next Bulk^ds
Stringer 28" x ·42"
5" Flange
Tie Plate 30" x ·42 Flanged on both edges 6"
Stringer 28" x ·40"
5" Flange
"J" IN
Flanges Sniped
Strut 15 x 4 x 4 x 1/2/·62 Channel
Web
6 x 3 1/2 x 3/8 at Each Frame
·40 Bk^t Midway between Struts
& Struts & Bulkheads
6 x 3 1/2 x 3/8 O.A. at Each Fr.
·40 Bk^t Midway between Struts
& Struts & Bulkheads
12'-0"
Heel of Inboard Foundation Bar
12'-0"
Heel of Inboard Foundation Bar
18-6 to Moulded Line
Plate 30" x ·42
6 Fl.
6 Fl.
Web ·42
3 as shown welded
"H" OUT
Frames 10 x 3 1/2 x ·40 BA
Spaced 31" apart
8'-9"
3 1/2 x 3 1/2 x 7/16
6 x 6 x 1/2 for 3 Spaces next Bulkhds
3 1/2 x 3 1/2 x 7/16
Stringer 32" x ·44"
5" Flange
Tie Plate as above
Stringer 32" x ·44"
5" Flange
Flanges Sniped
Strut 15 x 4 x 4 x 1/2/·62 Channel
"G" IN
18"
·44 Web
5" Flange
Side Shell ·62" to ·46" Butts Quadruple to Treble
+ ·01 at 31" Spacing
Centre Line of Ship.
Detail of Brackets between
Trans^s & Trans & Bulkhead
·42" Girder
Single 3 1/2 x 3 1/2 x 7/16
Single 3 1/2 x 3 1/2 x 7/16
3" Fl.
3" Fl.
·40"
·40"
7/8 Rivs
Single 3 1/2" x 3 1/2" x 7/16
6 x 3 1/2 x 3/8 O.A.
at Each Frame
·40 Bkt Midway between
Struts & Struts & Bhd
O.T. Bulkd.
Trans
Trans
O.T. Bulkd.
10'-4"
10'-4"
10'-4"
31'-0"
6 x 3 1/2 x 3/8 O.A
at each Frame
·40" Bk^t Midway between
Struts & Struts & Bhd
Stiffeners & Side Frames spaced 31" apart
Bottom Longitudinals spaced 36" apart
Transverses spaced 10'-4" apart
10-7/8 Rivs
Pack
1'-9"
11'-3"
Pack
23-7/8 Rivs
"F" OUT
·64" to ·50"
Rise of Floor 3"
5'-3"
7/8 dia Rivs. spaced 6 dias apart
6 x 3 1/2 x ·56 O.A. Single
Face Bar 6" x 3 1/2 x ·70 O.A. Double
·50" Strap
23-7/8 Rivets
7/8 Rivs spaced 4 dias apart
Continuous Horiz^tl Plating ·51"
·42" Bkt. Fl3"
6" Flange
·42"
3 1/2 x 3 1/2 x 3/8 Single
Long^tl 12" x 3 1/2" x ·50 BA
Lug to Bk^t 6" x 6" x 3/8"
3-7/8" Rivets
6 x 3 1/2" x 1/2 Single
6" Vert.
9-7/8 Rivs
Single 3 1/2 x 3 1/2 x 7/16
4'-0"
4'-3"
6 x 3 1/2 x 1/2"
37" x ·44
Parallel to Rise Line
6 x 3 1/2 x 1/2
4'-0"
5'-8"
6 x 3 1/2 x 1/2"
·44"
Intercostal
Cr. Girder ·42"
6 x 6 x 1/2 Double
40 1/2" above Top of Keel
Parallel to Base Line
3 1/2" x 3 1/2 x 7/16" Double
Weld
Weld
Weld
Single 6 x 6 x 1/2"
6" x 6" x 1/2" Single
Back Bar
3 1/2 x 3 1/2 x 7/16
6 x 6 x 1/2"
Single
5 1/4
7/8 dia Rivets spaced 4 dias apart
7/8" dia Rivs spaced 4 1/2 dias apt
7/8" dia Rivets spaced 4 dias Apt
3 1/2 x 3 1/2 x 7/16
Pack
6" Seam
4 x 4 x ·50"
2'-11 1/2"
3'-0"
3'-0"
6'-0"
3'-1"
3'-0"
3'-0"
3'-0"
3'-0"
3'-0"
3'-0 1/2"
3'-9"
7/8" dia Rivets spaced 6 dias
apart Crs in Flange to Shell
7/8" dia Rivs spaced 5 1/2" dias
apart Crs. Both Flanges
Long^tl 12 x 3 1/2 x ·50 BA
"E" IN & OUT
"D" IN
Extra Rivets
fitted as Compensation Ø
"C" OUT
"B" IN
KEEL OUT
53" x ·97" to ·77"
Butts Quint^le Overlaps for 1/2L
to Quad^le at Ends.
Transverse Continuous
Centre Girder Plates fitted
Intercostally between
Transverses
Bilge Radius 5'-0"
Bilge Keel
6 1/2" x 6 1/2" x 5/8" Tee Bar
10" x 1/2" Bulb Plate.
Bottom Shell ·70" in way of Long^tl Framing
- ·06" at Normal Spacing to ·50" at Ends.
Butts Quad^le Riveted Overlaps for 1/2L to Treble at Ends
Bottom Longitudinals 17" x ·58" x 4" x 4" x ·68" Channels

Furness Shipbuilding Company Ltd
Haverton Hill-on-Tees
Issue No X28164
Ship Drawing
Date 10.7.2

Nº T 4460.